Iowa STEM Education Evaluation (I-SEE): Navigating the Iowa STEM Roadmap

The Iowa STEM Education Evaluation (I-SEE): Navigating the Iowa STEM Roadmap project has been awarded a 3-year $1,199,624 grant by The National Science Foundation for the development of a model statewide STEM initiative evaluation under the direction of Jeffrey D. Weld, Gene Lutz, Mari R. Kemis, Donald Yarbrough, and Disa Lubker Cornish. The University of Northern Iowa will lead a collaborative effort of evaluation centers at Iowa's three public universities. State STEM Evaluation is a new category within the RETA (Research Evaluation Technical Assistance) aspect of the NSF's MSP (Math-Science Partnership) program. This award is the first of its kind and Iowa was the only state awarded a RETA. The award funds development of a model statewide evaluation system that comprehensively assesses the educational and economic changes that occur throughout long-term statewide STEM initiatives. The model may then inform other states. Although some aspects of the NSF-funded project will naturally contribute to the evaluation of Iowa's STEM Council activities, it is not intended (nor sufficient) to be sole source of evaluation funding for Iowa.

Component 1: Web-based data portal for the I-SEE

- Online location to compile data related to STEM education and economic development in Iowa.
- Data submission tool for STEM programs conducted throughout the state.
- Generate dashboard reports on STEM in Iowa for a variety of stakeholder groups.
- Support real-time GIS mapping of STEM-related data.

Component 2: Process evaluation

- Examine resources, needs, facilitating conditions, and barriers to statewide STEM change.
- Routine mixed-methods data collection with Executive and Advisory Council members.
- Comprehensive document review of work products from the Executive and Advisory Councils.

Component 3: Survey of Iowans

- General population survey of Iowans regarding awareness of and support for STEM education and economic development initiatives.

(I-See does not include targeted sampling of parents of children in grades K-12 or oversample to reach under-represented groups.)*

Component 4: Asset identification

- Development of a web-based, searchable database to identify and coordinate STEM resources within schools/districts, institutions of higher education, MSP projects, scalable STEM education programs, informal learning environments, and business and industry.
- Site will provide users with program information, evaluation results, contact information, etc.

Component 5: Evaluation model quality control

- Assessment of the quality of I-SEE evaluation systems and processes, judged against the *Program Evaluation Standards adopted by the Joint Committee on Standards for Educational Evaluation.*
- Internal self-study and external oversight by the I-SEE Advisory Board.

Clarification on the NSF award, and Iowa's STEM Council Monitoring

The NSF I-SEE grant funds the development of an evaluation model for State STEM. Some aspects of the study will contribute to annual assessment of Iowa's STEM initiative, however, Iowa's STEM monitoring project includes a number of aspects not included in the NSF award and thus rely on renewed funding by the Council.

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